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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/044,163	03/19/98	SHIMOKAWA	T 500.36133X00

020457 LM02/0831
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EXAMINER

LE, U

ART UNIT	PAPER NUMBER
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2771

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DATE MAILED: 08/31/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.
09/044,163

Applicant(s)
Simokawa et al

Examiner
Uyen Le

Group Art Unit
2771



☒ Responsive to communication(s) filed on Jun 27, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-12, 14, and 16-20 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-12, 14, and 16-20 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 27 June 2000 have been fully considered but they are not persuasive.

Regarding claims 1, 4, 7, 12, 14, 20, applicant argues that "neither Boyle nor Gallant disclose data areas loaded with data for a certain time" and that "the combination of Boyle and Gallant does not result in a data structure containing a plurality of data areas where each data area is loaded with data for a certain time". In response, the claimed "data areas loaded with data for a certain time" merely reads on the fact that data are added and deleted as needed and that memory is recoverable upon data deletion and reusable to store other data. Clearly, for memory management purpose, eventually all data areas are "loaded with data for a certain time". Applicant's argument regarding the references not showing that "the plurality of data areas are managed by time series" is noted. However, this limitation merely reads on the fact that data is time-stamped upon storage as shown by Boyle (see column 1, lines 57-66).

Applicant presents no further arguments regarding claims 2, 3, 5, 6, 8-11, 16-19 except they depend on allowable claims.

For the reasons discussed above, rejection to claims 1-12, 14, 16-20 is maintained using the references of record.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12, 14, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallant (US 4,648,036), in view of Boyle (US 4,646,229).

Regarding claim 1, the claimed data structure comprising a plurality of data areas, each of said plurality of data areas being loaded data for a certain time merely reads on the fact that a plurality of tables store data in the system of Gallant (see Figures 4-6). Clearly, for memory management purpose, eventually all tables of data areas are "loaded with data for a certain time". The claimed "the plurality of data areas being managed by time series" merely reads on the fact that data is time-stamped upon storage as shown by Boyle (see the abstract, column 1, lines 57-66). The claimed "bookmark information areas each having a pair of bookmark information indicative of time and state of the data" merely reads on the fact that a code field and key fields are used to identify the state of the data (see column 2, lines 21-59). The claimed online state is indicated by the code field being set to a first value. The claimed loading state is indicated by the code field being set to a second value. Gallant explicitly shows that the key fields contain relevant search parameters for a given table defined by a user (see column 4, lines 2-6). Furthermore, it is well known in the art to keep track of time-ordered data items as shown by Boyle. Therefore, it would have been obvious to one of ordinary skill in the art to include in a key field of the data structure taught by Gallant

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information indicative of a time corresponding to a time series data piece loaded in each table in order to allow searching of time-ordered data in a database.

Claim 4 differs from claim 1 only by reciting data pieces loaded at "predetermined locations" and "predetermined" bookmark information areas. Clearly storing data in a database requires predetermined location for storage. The claimed predetermined bookmark areas merely read on the location of a code and key fields storing status information (See Figure 2).

Claims 2, 5 merely recite the well known fact that no data storage has unlimited space and that bookmark indicators can be read consecutively. Clearly, since data is stored in consecutive tables in a database, the bookmark indicators are also read consecutively (see Figures 2, 4-6).

Regarding claims 3, 6, Gallant disclosed the claimed state transition information when Gallant shows the update, non-update and post-update states. The claimed online state is indicated by the code field being set to a first value. The claimed loading state is indicated by the code field being set to a second value and the claimed empty state is indicated by the code field being set to a third value (see the abstract, column 2, lines 21-59).

Claim 7 corresponds to a method utilizing the data structure recited in claim 1 with the added limitation of providing also a value indicating a state in which data is empty. Therefore, is rejected for the same reasons discussed in claims 1 and 3 above.

Claims 8, 9 merely read on responding to data retrieval request by reading the code field and key field in the method of Gallant and providing the data requested if such data is available.

Claim 10 merely reads on responding to data deletion request by reading the code field and key field in the method taught by Gallant.

Claim 11 adds the limitation of storing data pieces for a predetermined time and adding a bookmark identifying the collection in the storage area. It would have been obvious to one of ordinary skill in the art to do so in order to identify a collection of data by the same bookmark for easy retrieval in the method taught by Gallant.

Regarding claim 12, Gallant discloses a database management method including adding bookmark information indicating state transition when Gallant shows that the code field value is indicative of the state of the data (see column 2, lines 21-59). Gallant explicitly shows that key fields are used to add relevant search parameters (see column 4, lines 2-6). The claimed start area information having a flag and an address area merely read on key fields taught by Gallant. Furthermore, Boyle explicitly shows the concept of a time-ordered database (see the abstract). Clearly, for memory management purpose, eventually data areas of a database are "loaded with data for a certain time". The claimed "the plurality of data areas being managed by time series" merely reads on the fact that data is time-stamped upon storage as shown by Boyle (see the abstract, column 1, lines 57-66). Therefore, it would have been obvious to one of ordinary skill in the art to include adding all the claimed information to the key fields in

the method of Gallant in order to keep track of the time, state, address and identity of each data piece in the database.

Regarding claim 14, Gallant discloses a database managing method including reading bookmark information and writing bookmark information when Gallant shows that the code field values change according to the state of the data (see the abstract, column 2, lines 21-59). Claim 14, lines 3-9 merely reads on the fact that after deletion, the code field is set to a third value. Lines 10-13 merely reads on the fact that data is loaded to the empty areas detected. Clearly, for memory management purpose, eventually data areas of a database are "loaded with data for a certain time". The claimed "the plurality of data areas being managed by time series" merely reads on the fact that data is time-stamped upon storage on a database as shown by Boyle (see the abstract, column 1, lines 57-66). Lines 14-17 merely reads on the fact that the code field is set to a first value indicating that data is available. Therefore, it would have been obvious to one of ordinary skill in the art to include loading data in sequence of time as claimed in order to time-order the database for future execution.

Claim 16, 17, 18, 19 are rejected for the same reasons discussed respectively in claims 8, 9, 10, 11 above.

Regarding claim 20, Gallant discloses a database managing system (see the abstract). Boyle discloses a time-ordered database (see the abstract). Since a time ordered-database would allow future execution as shown by Boyle, it would have been obvious to one of ordinary skill in the art to implement the database of Gallant as a time-ordered database. Furthermore, lines 2-5 merely recites components indispensable for

any computer system to store timestamped data. The claimed database is met by element 130. The claimed bookmark information is met by the code field and key fields shown by Gallant. The claimed online, loading and empty state merely read on the first, second and third value of the code field respectively indicating whether data is available or is being updated or had been deleted. Clearly, for memory management purpose, eventually the memory stores data "for a certain time". The claimed "the memory being managed by time series" merely reads on the fact that data is time-stamped upon storage as shown by Boyle (see the abstract, column 1, lines 57-66).

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen Le whose telephone number is (703) 305-4134.

The examiner can be reached on Monday through Thursday from 7:00am to 5:30pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703)305-9707.

Any response to this action should be mailed to:

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or faxed to: (703)308-9051, (for formal communications intended for entry)

or: (703)308-5403 (for informal or draft communications, please label

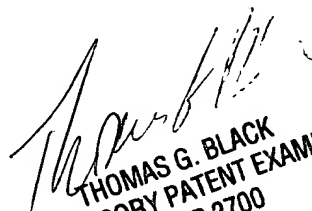
PROPOSED or DRAFT)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone is (703)305-3900.

UL

08/28/00


THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 2700